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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,271	01/27/2004	Peng Li	12583.28USU1	7573
7590 11/30/2006				
Merchant & Gould P.C. P.O. Box 2903 Minneapolis, MN 55402-0903		EXAMINER ALPHONSE, FRITZ		
		ART UNIT PAPER NUMBER		
		2133		

DATE MAILED: 11/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,271

Applicant(s)

LI ET AL.

Examiner

Fritz Alphonse

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 15-28 are rejected under the judicially created doctrine of double patenting over claims 16-27 of U. S. Patent No. 6,356,850 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

Claims 15-28 of the present application (No. 10/765,271) and claims 16-27 of U. S. Patent No. 6,356,850 are functionally equivalent.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholtz (U.S. Pat. No. 5,325,397) in view of Budde (U.S. Pat. No. 7,136,442).

As to claim 15, Scholtz discloses an apparatus for determining a bit error rate in a communication system, the apparatus including a measurement apparatus for measuring the communication system to determine probability density functions corresponding to a plurality of causes of bit errors (fig. 6; col. 11, lines 50-66). Scholtz discloses an analyzing means for integrating each of the probability density functions over an interval representing a range in which the corresponding cause creates a bit error, thereby generating a plurality of integrated quantities, and summing the integrated quantities to arrive at a bit error rate for the communication system (col. 3-4; col. 10, lines 8-51).

Scholtz does not explicitly disclose an analyzing unit operatively connected to the measurement apparatus.

However, in the same field of endeavor, Budde (fig. 1) discloses a receiving circuit including an analyzing unit (9) operatively connected a measurement apparatus (7).

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time of the invention to incorporate the teaching of Budde in the error rate monitor device, as disclosed by Scholz. Doing so would prevent errors from occurring that might arise as a result of poor synchronization between transmitter and receiver (col. 1, lines 48-50).

As to claims 16-19, Scholtz discloses an apparatus, wherein the measurement apparatus measures occurrences of waveform edges transition being tardy (figs. 3-4); the measurement apparatus measures occurrences of waveform edges transition being premature, excessive waveform amplitude and occurrences of insufficient waveform amplitude (col. 10, lines 8-51).

As to claims 20-21, Scholz (figs. 2-4, 10) discloses an apparatus, wherein the analyzing unit is further configured and arranged to integrate each of the probability density functions over

various intervals; wherein the analyzing unit is further configured and arranged to represent the ordered pairs on a display (col. 17, lines 1-28).

As to claims 22-24, Scholtz (figs. 2-4, 11) discloses an apparatus, wherein the known function is a gaussian function; and, wherein the portion of the partially measured probability density function is a tail portion (col. 17, lines 1-48).

As to claims 25-28, Scholz (figs. 2-4, 11) discloses an apparatus, wherein the analyzing unit is further configured and arranged to fit a tail portion of a partially measured cumulative distribution function to a known function to arrive at a complete cumulative distribution function; and, wherein the known function is an error function; and, wherein the analyzing unit is further configured and arranged to take the derivative of a measured cumulative density function to arrive at a probability density function (col. 3-4; col. 10, lines 8-51).

As to claim 1, method claim 1 corresponds to apparatus claim 15; therefore, it is analyzed as previously discussed in claim 15 above.

As to claims 2-5, Scholz discloses a method, wherein the plurality of causes include a waveform edges transition being tardy (figs. 3-4); the plurality of causes includes a waveform edge transition being premature and excessive waveform amplitude and insufficient waveform amplitude (col. 10, lines 8-51).

As to claims 6-7, method claims 6-7 correspond to apparatus claims 20-21; therefore, they are analyzed as previously discussed in claims 20-21 above.

As to claims 8-10, Scholtz (figs. 2-4, 11) discloses a method, wherein measuring the communication system to determine a corresponding probability density function includes the step of fitting a portion of a partially measured probability density function to a known function

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to arrive at a complete probability density function; and wherein the known function is a gaussian function; and, wherein the portion of the partially measured probability density function is a tail portion (col. 17, lines 1-48).

As to claims 11-14, Scholz (figs. 2-4, 11) discloses a method, wherein measuring the communication system to determine a corresponding probability density function includes fitting a portion of a partially measured cumulative distribution function to a known function to arrive at a complete cumulative distribution function; and, wherein the known function is an error function; and, taking the derivative of a measured cumulative density function to arrive at a probability density function (col. 3-4; col. 10, lines 8-51).

As to claims 29-33, method claims 29-33 correspond to apparatus claims 15-28; therefore, they are analyzed as previously discussed in claims 15-28 above.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

or faxed to: (703) 872-9306 for all formal communications.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse, whose telephone number is (571) 272-3813. The examiner can normally be reached on M-F, 8:30-6:00, Alt. Mondays off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert De Cady, can be reached at (571) 272-3819.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Fritz Alphonse

Art Unit 2133

November 24, 2006



ALBERT DECADY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100